## REMARKS

Claims 6, 8, 9, 12-23, and 27-30 are in the application for further consideration. Applicant appreciates the indication of allowability of claims 8-9, 16, and 28-30 if rewritten in independent form, and claims 8 and 16 have been so-rewritten. Claims 9 and 28-30 now depend on allowable independent claim 8

The remaining grounds of rejection for reconsideration are as follows:

1. Whether claims 6, 19-23 and 27 are unpatentable over for obviousness under 35 U.S.C. 103(a) over Kazumi (JP-02-904593) in view of Buckmaster (U.S. Patent 4,714,756)
2. Whether claims 12, 14 and 15 are unpatentable for obviousness under 35 U.S.C. 103(a) over Kazumi
3. Whether claims 17 and 18 are unpatentable for obviousness under 35 U.S.C. 103(a) over Kazumi in view of Buckmaster
4. Whether claim 13 is unpatentable for obviousness over Kazumi and Buckmaster in view of Saito et al. (Saito, U.S. Patent 5,397,831)

## Argument

Ground 1 - Claims 6, 19-23 and 27 are non-obvious over Kazumi in view of Buckmaster

Claims 6, 20, 21, 23, and 27 stand or fall together. Claims 19 and 22 present additional basis for non-obviousness and will be discussed separately below.

Claims 6, 20, 21, 23, and 27

Kazumi discloses the following under "**Problems to be solved by the invention**":

> "Accordingly, an inorganic powder or metal powder such as glass, silicon, zinc, aluminum (Al), copper (Cu), etc., is mixed into the above-mentioned fluororesin to suppress bubble generation." [0007]

Kazumi also discloses that powder obtains the result of "no bubbles remain in the PFA." [0017].

The rejection takes Buckmaster as disclosing fluorine stabilization as reducing bubbling of the PFA during heat processing.

The question of patentability that is presented is whether it is obvious to incorporate the bubble-reducing fluorine-stabilized fluoropolymer into Kazumi's composition that already provides bubble free linings.

There is reason and legal authority in support of the conclusion that it is not obvious to combine references in this fact situation, i.e. to solve a problem that has

already been solved by one of the references. In KSR International v. Teleflex, Inc, 82 USPQ2d, 1385 (S. Ct. 2007), the Court stated:

> "The Court of Appeals finally drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias. A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautions of arguments reliant upon ex post reasoning.....Rigid preventive rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor inconsistent with it." (p. 1397)

The Court thus expects the exercise of common sense in evaluating the prior art against the claimed invention. It is not an exercise of common sense to incorporate the bubble reduction teaching of Buckmaster into Kazumi to solve a bubble problem that has already been solved by the use of the powder in Kazumi. The disclosure of bubble free in Kazumi is unequivocal, "no bubbles remain in the PFA" [0017].
The Board of Patent Appeals and Interferences agrees with this common sense approach. In both Ex parte Green, Appeal no. 2007-1271 and Ex parte Rinkevich and Garrison, Appeal 2007-1317, the Board of Patent Appeals and Interferences citing KSR concludes that the combining of references to solve a problem already solved by one of the references failed the common sense test, i.e. was not an obvious combination to one skilled in the art.

The rejection seeks to avoid the inevitable conclusion of non-obviousness by simply ignoring the disclosure of the bubble–free effect of the powder in Kazumi. In this regard, the rejection states that Kazumi teaches:

> "adding a composition consisting essentially of the .....("PFA") and non-bubble-promoting....metal powder....to the interior of said article" (p. 2)

Nowhere in the explanation of the obviousness rejection is it acknowledged that the Kazumi powder eliminates bubbles from the lining. The reading of the explanation of the rejections suggests that the only function of the powder is not to cause bubbles. The disclosure of a PFA/powder composition as a lining of the interior of the article to be rotolined is inseparable from the purpose of the powder in the composition to provide a bubble-free lining. The common sense result of the decisions in Green and Rinkevich and their applicability to the present fact situation, cannot be avoided by incompleteness in the statement of rejection.

The rejection notes that Kazumi and Buckmaster together fail to teach adhesion characterized by a peel strength of at least 25/in. Logic and the Constitutional mandate for rewarding inventors for their contributions would suggest that failure to teach Applicant's result would be taken as an indication of inventiveness, deserving of patenting. Certainly, one skilled in the art seeking to solve the problem of PFA not adhering to the rotomold as disclosed in Scheirs (see p.1 of Applicant's specification) and confirmed in Applicant's Example 1, would not be led by Kazumi to Applicant's solution as recited in claims 6, 20, 21, 23, and 27.

Nevertheless, the rejection seeks to buttress its conclusion of obviousness with a number of miss-statements of the facts and miss-applications of the law to be discussed hereinafter. These miss-statements and miss-applications all refer to Kazumi. Regardless of how the discussion thereof is viewed, the fact remains it is not obvious to incorporate Buckmaster into Kazumi to solve the bubbling problem already solved by Kazumi as discussed above.

The rejection mistakenly asserts that Kazumi has the desire to create an adherent lining and that Kazumi inherently satisfies this desire by using the same additives in the same amount as Applicant. The rejection goes further in asserting "Kazumi explains that in the light of past problems with adhesion, the Kazumi method is a technique to adhere the fluororesin to the hollow article." (p. 6).

In response, first, the fictional desire and achievement of this desire is contradicted by Kazumi. "Adhered" is disclosed in one place in Kazumi, notably the description of "not being adhered" in connection with the prior art attempt to stuff a bag through a container opening to serve as a lining within the container [0003]. The act of stuffing the bag through the container opening would not even lead to the bag conforming to the interior surface of the container. Kazumi, next refers to "In consideration of the above-mentioned problems" the invention proposes rotolining[0005]. For "in consideration of the above-mentioned problems" to include achievement of adhesion overlooks the Kazumi disclosure of "**Problems to be solved by the invention"**, wherein suppression of bubbling is the only solution mentioned [0006] and [0007]. No mention of solving the well-known problem of PFA not adhering to the rotomold is made in Kazumi. The asserted "Kazumi explains" is nowhere to be found in Kazumi.

Second, the achievement of adhesion by the present invention is not just any amount of adhesion but is a very high degree of adhesion as indicated by the minimum peel strength of 25 lb/in recited in claims 6 and 20. In addition, the high degree of adhesion is achieved using only a small amount of certain metal powders, ones that promote adhesion but do not cause bubbling, as indicated by the maximum

amount of 2 wt% recited in claims 6 and 20. Applicant's Example 3 discloses the peel strength falls from 42.6 lb/in) at 0.8 wt% metal powder to 37.2 lb/in at 1.1 wt% metal powder. Example 5 discloses that the peel strength of the stabilized PFA composition (Copolymer A) on stainless steel falls from 41.5 lb/in at 0.5 wt% metal content to 28.35 lb/in at 1.0 wt% metal content. Example 4 discloses that 0.5 and 1.0 wt% Al powder in the composition causes bubble formation in the rotolining. These showings reveal that peel strength falls rapidly at 1.0 and 1.1 wt% concentrations, together with the bubbling occurring when the same amount of Al powder is used. Example 6 discloses peel strength falling from 36.5 lb/in at 1 wt% Zn in the composition to just 18 lb/in when the Zn content is increased to 3 wt%. The copolymer D of Example 6 is comparable in peel strength to that for copolymer A in Example 5.

In contrast, to achieve non-bubbling, Kazumi has a much broader disclosure of powders and amounts as follows:

- •inorganic powder or metal powder
- •such as glass, silicon, zinc, aluminum, or copper
- •in the amount of 0.1 to 30 wt%, with about 5 wt% being most effective for removing bubbles. [0018].

Kazumi has no disclosure of the combination of Applicants metal powder and the small amount thereof recited in claims 6 and 20 to achieve the high peel strength recited in these claims.

Third, the absence of disclosure in Kazumi of the combination of Applicant's metal powders together with amount thereof being no greater than 2 wt%, encompassing the small amounts that provide the high peel strength, negates the charge of inherency asserted in the rejection. It is a miss-statement of fact to assert that Kazumi uses the same additives in the same amount. Section MPEP § 2112 is relevant to the inapplicability of inherency to negate Applicant's discovery of high peel strength. That section states as follows:

> The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." (MPEP § 2112-IV)

This section of the MPEP cites In re Oelrich, 212 USPQ 323, 326 (CCPA 1981) for the proposition that the inherency must be necessary, and In re Robertson, 49 USPQ2d 1949, 1950-51 for the proposition that "may occur" is not sufficient for a conclusion of inherency. The citation of In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed.

Cir. 1993) in this MPEP section seems particularly relevant in its conclusion that an assertion of optimization does not satisfy the requirement that the result or characteristic is necessarily present in the prior art. The broad disclosures of Kazumi as to powder and amounts to obtain a bubble-free lining do not provide legal basis for the conclusion that Kazumi inherently obtains Applicant's adhesion result recited in claims 6 and 20.

The rejection mistakenly relies on Wertheim as though prima facia obviousness is dispositive of the obviousness of applying Kazumi's disclosure against Applicant's claims. Should prima facia obviousness exist, it is rebutted by Applicant's discovery that a small amount of metal powders that do not themselves cause bubbling impart a very high peel strength to the PFA composition, as recited in Applicant's claims.

The rejection misapplies Aller in considering that Applicants' discovery of a new effect of compositions (additives and amounts) not disclosed in combination in Kazumi as mere optimizing and increasing the usefulness of the metal powder. Optimizing is the enhancement of the Kazumi known effect, not the finding of a new effect.

The rejection misapplies Obiaya in considering Applicant's discovery to flow naturally from the practice of Kazumi. The inapplicability of inherency as discussed above is applicable here. There is no natural flow to the present invention from Kazumi's broad disclosure of additives and amounts to achieve the "**Problems to be solved by the invention**", i.e. to provide a bubble-free lining.

In any event, it is not obvious to combining Buckmaster into Kazumi to solve a bubble problem already solved by Kazumi.

Claims 19 and 22

These claims are unobvious and therefore patentable on the same basis as the parent claims 6 and 20. Additionally, the metal powder concentration of 0.3 to 1.2 wt% is not expressly disclosed in the Kazumi disclosure of the 0.1 to 30 wt% powder additive range. Thus, Kazumi does not disclose the combination of this amount of additive together with the additive as recited in these claims and does not suggest that this combination will obtain the peel strength of at least 25 lb/in as recited in these claims. The above discussion of Wertheim and Aller is applicable to any reliance on these legal authorities against claims 19 and 22.

Ground 2 - Claims 12, 14 and 15 are nonobviousness over Kazumi

Claims 12, 14, and 15 are unobvious and therefore patentable over Kazumi on the same basis as claim 6. Kazumi does not disclose or suggest the 2 wt% or less of these metal powders as providing the high peel strength of at least 25 lb/in for the

PFA/metal powder composition, especially in view of the knowledge from Scheirs that PFA by itself has no adhesion to steel.

Of course, Kazumi does not provide the fluorine-stabilized PFA recited in these claims, and Buckmaster is not obviously applicable to fill this void as discussed above.

Ground 3 - Claims 17 and 18 are nonobviousness over Kazumi in view of Buckmaster

Claims 17 and 18 are nonobvious and therefore patentable on the same basis as claim 6. It is not obvious to incorporate Buckmaster into Kazumi for the purpose of imparting the non-bubbling attribute of the fluorine stabilized fluoropolymer into Kazumi, since Kazumi has already solved this bubbling problem by the incorporation of powder into the fluoropolymer. The recitation of details of the fluoropolymer stabilization in claims 17 and 18 does not lessen the non-obviousness of these claims.

Ground 4 - Claim 13 is nonobviousness over Kazumi and Buckmaster in view of Saito

Claim 13 is nonobvious and therefore patentable over Kazumi and Buckmaster on the same basis as claim 6. The disclosure of tin stabilizer in Saito does not lessen the nonobviousness of incorporating Buckmaster into Kazumi for the purpose of imparting the non-bubbling attribute of the fluorine stabilized fluoropolymer into Kazumi, since Kazumi has already solved this bubbling problem by the incorporation of powder into the fluoropolymer.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

The fee for the extra independent claim contained herein and any other required fee should be charged to deposit account 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

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